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ABSTRACT

The primary purpose of this experiment is to determine the effect of reading development based on phonemic transcription and traditional orthography on the pronunciation of French as a second language. Sixteen level 1 French classes in Western New York State schools participated in the experiment in which the control and experimental classes completed six weeks of study of an introductory French text in which the first three units were transcribed for the experimental group along the lines of the International Phonetic Alphabet. Changes were made, as necessary, in order to create additional symbols resembling the traditional grapheme as closely as possible. Pronunciation tests were administered following the initial period, and statistical results are discussed. Concluding remarks confirm the belief that the effect of the written form of a language depends on the degree of correspondence which exists between the conventional orthography and the phonology of that language. (RL)

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AN EXPERIMENTAL STUDY OF THE TEACHING OF FRENCH PRONUNCIATION USING AN AD HOC PHONEMIC ALPHABET

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In teaching the speaking skill, one of the basic problems confronting the foreign language teacher is how to develop near-native pronunciation in his students. Following a lead suggested by Lado[1] to the effect that there might be a difference using a phonemic transcription vs. ordinary spelling, the researchers devised a system of written symbols based upon the IPA with some important differences, however.

The primary purpose of the experiment was to determine if there was a significant difference in the pronunciation of two groups of French students: one instructed with the aid of the ad hoc phonemic transcription, the other with the aid of T.O. (traditional orthography). Each teacher involved in the study had paired beginning French classes with the exception of one who had four. Each class of the matched pairs was assigned at random either to the experimental group or to the control group.

SAMPLE

The sixteen level I French classes were all located in Western New York, two in a Buffalo high school, fourteen in suburban schools. The split according to type of school was equal, eight classes being located in senior high schools and eight in Junior high schools, with seven

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1. Robert Lado, Language Testing: The Construction and Use of Foreign Language Tests (London: Longmans, Green, 1961).

teachers being involved. All told, 149 students were taught by means of the experimental transcription whereas 144 students used the traditional French orthography.

MATERIALS AND PROCEDURES

Upon terminating the pre-reading phase, each teacher distributed the regular texbook to the students in the control classes while the same text, transcribed into phonemic symbols, was given to the pupils in the experimental classes. Inasmuch as the study was to last but six weeks, only the first three units had been transcribed.

As mentioned above, the experimental alphabet duplicated the symbols of the International Phonetic Alphabet for the most part. However, eight new symbols were substituted for the purpose of facilitating the transition from reading the transcription to the traditional orthography after the thirtieth lesson. The principle followed was identical to that behind the Initial Teaching Alphabet, i.e. that the symbol insofar as possible should resemble the traditional grapheme.

Proceeding in this manner, the researchers substituted the symbol /gn/ for IPA's /ɲ/ since the French spelling for this sound is always "gn". By learning the /gn/ combination symbol in the first place, the student does not have to relearn it when he switches later on to the T.O. The same thing can be said for the sound of <u>ch</u>ose. IPA uses the symbol /ʃ/ whereas the <u>ad hoc</u> alphabet uses /ch/, for the very reason that this sound is almost always represented by the letters "ch" in French spelling.

The IPA represents the t<u>u</u> sound by the symbol /y/ which is itself a French letter pronounced differently from the symbol. In order to

eliminate this ambiguity, the researchers chose the symbol /u/ to represent this sound which is spelled "u" in French, without exception. The bon sound is represented by /ɔ̃/ rather than the IPA's / / because this phoneme is closer to a nasalized closed "o" than a nasalized open "o".

The vous sound is represented in IPA by the symbol /u/. The interference in transferring to the T.O. is obvious here. The student who learned to pronounce /vu/ (IPA) as vous would naturally pronounce vu as vous once he had progressed to the T.O. Since the ou sound of vous is invariably spelled "ou", the writers have chosen to represent this sound by the compound symbol /ou/ for the sake of simplicity.

The IPA uses special symbols for the semi-vowels hier - /j/, huit - /ɥ/, and oui - /w/. Realizing that the value of hier is about half of an /i/, the writers have elected to represent it by means of an /i/ with a slash through it, thus: /i/, indicating that the length of the phoneme /i/ has been cut. The same principle operates in the choice of /u/ for half a /u/ and the choice of /ou/ for half a /ou/. The point we tried to make was not that these were completely different sounds, but that they were the SAME sounds, of shorter duration. It was hoped that by means of this symbolization, the relationship between the vowels /i/, /u/, and /ou/and their corresponding semi-vowels might be made more clear.

THE PRONUNCIATION TEST

The pronunciation test had two parts, discrimination and production. The discrimination section was entirely passive in that the students listened only, trying to distinguish between minimal pairs that they heard, either French-English or French-French, forty-eight items in all.

If the student heard tout-tout, he should have written "s" to indicate that they were the same. If he heard tout-two, he should have written "D" to indicate that they were different. Other examples are:

meal - mille

toc - talk

bain - bon[2]

Part B of the discrimination test consisted of thirty triplets. The examinees were required to tell which words in the triplets were the same. If they heard vont-vent-vont correctly, they wrote 1,3 to indicate that the first and third words were the same. If they heard faux-feu-fut correctly, they wrote "o" to indicate that all three words were different. Likewise, if they heard sont-sont-sont correctly, they wrote 1,2,3 to indicate that all three words were the same. At one point per item, the discrimination test counted a possible 78 points.

Following Lado's admonition to test in areas where the languages differ, the examiners obliged the students to pronounce troublesome French phonemes, mainly those which have no counterparts in English. Two points were scored for native or near-native pronunciation, one point for adequate pronunciation and none for unsatisfactory. The subjects read arabic numbers from one to twenty in French and were judged according to their pronunciation of the underlined phonemes: un, deux, trois, sept (exploded), huit, neuf, onze, douze, treize, quatorze, quinze, dix-huit, dix-neuf, and vingt. They likewise read four sentences containing the

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2. Most of the examples were taken from A Drillbook of French Pronunciation by Valdman, Albert; Salazar, Robert; and Charbonneaux, Marie Antoinette. (New York: Harper & Row Publishers, 1964)

key sounds /u/ as in "tu" and /a/ as in "mange".

Then the students were given an echo test during which the examiner pronounced nine sentences with the critical phonemes while the examinnes repeated them without seeing the script.

1. La corde est rouge.	/R/
2. Tu l'as vu?	/u/
3. Ses yeux sont bleus.	/o/
4. J'ai neuf soeurs.	/oe/
5. Le prince a faim.	/ɛ̃/
6. Jean a dix ans.	/ɑ̃/
7. Le pont est long.	/ɔ̃/
8. J'ai un livre brun.	/œ̃/
9. Je suis avec lui.	/ɥ/

The production test was recorded on tape to save time and to permit more meticulous scoring, i.e. each tape was corrected twice by the examiner. With 36 items at 2 points each, the production test was worth 72 points. Adding this to the 78 points of the discrimination test produced a perfect score of 150 points.

TABLE 1

CLASS AVERAGES ON THE FINAL PRONUNCIATION TEST FOR THE CONTROL AND EXPERIMENTAL GROUPS

Teacher	Control Group	Experimental Group	Difference in Group Means
A	116.0555	118.3889	2.3334
B	123.7500	122.3889	- 1.3611
C	105.4667	120.0526	14.5859
D	102.6522	105.3750	2.7228
E	122.4118	120.5000	- 1.9118
F	103.0294	112.8684	9.8390
G	105.5938	107.8500	2.2562
H	116.5500	119.8250	3.2750

The t test for the significance of the difference between means demands equality of the population variances. In this study, the population variances were not equal, the variance of the phonetic group being .721 while the variance of the control group was 1.026. A method for use where the variances are unequal was devised by Cochran and Cox wherein an adjustment is made in the value of t necessary for significance at any particular level of reliability.[3]

The value required for significance at the 5 per cent level in testing the significance of the difference between the means of the two groups is 1.96. This value is less than the obtained value, 3.1619. Consequently, we may conclude that the difference between means is significant at the 5 per cent level. As a matter of fact, the value required for significance at the 2 per cent level (2.326) is also less than the obtained value, 3.1619. Therefore, we may also conclude that the difference between means is even significant at the 2 per cent level of reliability.

MAJOR FINDING

The results support statements made by Pimsleur[4] and Roland[5] concerning their own research. They both concurred that the effect of the written form of a language depends on the degree of correspondence which exists between the conventional orthography and the phonology. In essence, the more phonemic the spelling of a language, the easier it is to read and pronounce. This would seem to explain the superiority of the experi-

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3. George A. Ferguson, Statistical Analysis in Psychology and Education (2nd ed., New York: McGraw-Hill Book Company, 1966), p. 171
4. Paul Pimsleur, "Further Study of the Transfer of Verbal Materials Across Sense Modalities," Journal of Educational Psychology, LV (1964), p.102.
5. Lyn Roland, "An Experiment in a pronunciation Problem," International Review of Applied Linguistics, IV, No.4 (December 1966), p. 259.

mental group as far as pronunciation was concerned inasmuch as their phonemic transcription offered a perfect sound-symbol correspondence.